

REMARKS

Reconsideration and allowance of the application, as amended, are respectfully requested.

Claims 1, 9, 12, 14, 44 and 45 have been amended. Withdrawn Claims 13, 16-24, 26-28, 31-43 and 47-72 have been cancelled. Claims 75-94 have been added to better define the invention. All of the added claims read on the elected species of Figure 1. New Claims 75-84 and 95 depend on Claim 1. New dependent Claims 85-87 depend on Claim 14. New dependent Claims 88 and 89 depend on Claim 44.

Independent Claim 1, as amended, and its dependent claims are submitted to be patentable over the inventor's prior patent, U.S. Patent No. 6,164,024, in that Claim 1 recites three separate retention elements viz, the retention clip, the internal connector, and the external covering connector whereas the '024 Patent discloses in Figure 12 only a clip 62 and an outer covering connector (batten 70) and lacks the recited internal connector. See Paragraphs 7, 11 and 15 of the attached Rule 132 Declaration. Claim 1, as amended, recites that the retention clip has a "portion configured to engage and to retain the adjacent glazing panels under high loads." The clip 58 of the '024 Patent is not both the internal connector and the clip as stated in the rejection of Claim 1. The '024 Patent lacks any internal connector and has only a clip. Claim 1 recites that the internal connector is "configured to assist the retention clip in the retention of the glazing panels." The internal connector was

added by the inventor to provide additional retention force to assist the clip in solving the problem of how to provide greater structural stability to the glazing panel system of his prior design which is disclosed in Figure 12 of the '024 Patent. Applicant's prior '024 glazing panel system is identified on Pages 3, 15 and 16 which describe the problem of retention of glazing panels using the clip only system of the '024 Patent under these very high uplift loads on the glazing panels from these very high winds because of the hinging of the glazing panels. This hinging using the '024 Patent system is illustrated in Figures 6 and 7 of this application, with a consequence of the panels being blown away. As recited in Claim 1, this hinging problem is solved by the addition of an internal connector to the previously existing clip and outer connector shown in Figure 12 of Applicant's '024 Patent; and the internal connector provides additional retention forces "to assist the retention clip in the retention of the glazing panels against separation," as recited in amended Claim 1. Certainly, the top flange of the '024 clip cannot be both the clip and an internal connector that adds assistance to the clip, as recited in Claim 1. Thus, Claim 1 recites three retention elements and the '024 Patent has only two retention elements. Moreover, Claim 1, as amended, recites that the external connector covers both the internal connector and the clip portion whereas the external cover connector 70 in the '024 Patent covers only the clip. The '024 Patent certainly lacks the recited combination of: (1) an external connector covering an internal connector as well as the clip because the covering connector 70 in the '024 Patent covers a clip only, and

(2) an internal connector adding additional panel retention to that provided by the clip. Thus, it is submitted that Claim 1 and its dependent Claims 75-84 and 95 are patentable over this '024 Patent.

Dependent Claim 2 adds that both the internal and external connectors are inverted, substantially U-shaped channels. The '024 clip 58 has an overall T-shape rather than the recited inverted, substantially U-shape. The '024 clip is not a channel. Thus, Claim 2 is patentable for this additional reason.

Dependent Claim 78 adds to Claim 1 that the internal connector is "superimposed over the clip," and Claim 79 adds to Claim 78 that the internal connector "is configured to cover the top flange of the clip." These structures recited in Claims 78 and 79 are totally missing in Konstantin '024 and, hence, Claims 78 and 79 are patentable for these additional reasons.

Dependent Claim 84 depends on Claim 1 and is directed to a glazing panel system wherein there are two connectors each having different constructions related to their respectively different primary functions whereas the '024 Patent has but a single external connector of only one strength. More specifically, Claim 84 recites that the internal connector is made of metal and is made stronger to resist panel separation under high loads and that the external connector is made of plastic and performs the weatherproofing function.

Neither Bezner nor the '0234 Patent have two connectors each made of different material for performing a different primary function. Thus, it is submitted that Claim 84 is patentable.

Dependent Claim 95 adds to parent Claim 1 the recitation of an inner and external connector each having a different primary function and each having a different strength and flexibility whereas the '024 Patent has a single connector made of one material to perform only its primary function of weather proofing. By having two different connectors, rather than a single connector, each connector may be made differently for its respective function, which is not true for the single connector of the '024 and Bezner Patents. Because of these structural and functional distinctions over the '024 Patent, Claim 95 is submitted to be patentable for this additional reason

Claim 11, which depends on Claim 1, is submitted to be patentable over Konstantin '024 Patent and Bezner in that Bezner not only lacks a clip but also lacks an internal connector that assists the clip in retention of the glazing panels. Bezner has a single retention panel joint member 18 and hence cannot overcome the deficiency of Konstantin '024 Patent's lack of a combination of three retention elements comprising a clip, an internal connector and an outer covering connector covering both the clip and internal connector. Moreover, Claim 11 recites that the internal connector is an inverted channel. Because both Konstantin and Bezner lack an internal connector in addition to a clip, there is no disclosure of an internal connector having the shape of an inverted channel.

It is submitted that not only does the combination of Konstantin '024 and Bezner fail to have the three retention elements recited in Claim 11 but also there is no suggestion or teaching in either Bezner or Konstantin to combine them. Bezner is directed to the problem of reducing the stacking height of glazing panels whereas the present invention is directed to the problem of increased retention of the glazing panel against uplift forces from high winds such as hurricanes as illustrated in Figures 6 and 7 and described in detail therein. More specifically, at the top of Pages 3 and 15 of this application as well as in other places, the '024 Patent is described in connection with the problem being solved with this invention. The only rationale to combine them is from this invention not from either of them. In view of the above it is submitted that Claim 11 is patentable.

Claim 14 and its dependent Claim 15, 29-30 and 85-87 are submitted to be patentable over the combination of Konstantin '024 and Bezner in that each of them lacks the recited:

“portion of the retention clip extending transversely from the clip web and spaced upwardly of the clip base and for engaging the respective inner seam flanges of the first and second glazing panels at locations lower than the top ends of the outer seam flanges for resisting uplift loads.” (emphasis added)

More specifically, Konstantin '024 lacks the recited pair of seam flanges, e.g., the inner seam flange 14a, 14b and between the outer seam flanges 14, 14. It is the outer seam

flanges 14, 14 that are connected to the seam covering member 20, which is also recited in Claim 14. Bezner on the other hand lacks any retention clip “disposed between adjacent first ends of the first and second panels” as recited in Claim 1. Bezner lacks a retention clip having a base “for being secured to a support member for the glazing panels.” Konstantin and Bezner are directed to different problems. The ‘024 structure is identified on pages 3 and 15 and describing that this ‘024 retention clip engages the seam flanges at high locations and that the angle defined between adjacent seam flanges is increased (see Figures 6 and 7) with increased bowing of the uplifted glazing panels. The present invention solves this problem, as defined in Claim 14 with a pair of inner seam flanges engaged by the retention clip at locations lower than upper ends of outer seam flanges for resisting these uplift loads. Konstantin ‘024 lacks the recited pairs of inner and outer seam flanges and the retention clip of Konstantin ‘024 engages the single pair of seam flanges at a high location, which is a cause of the high hinging problem as described in this application on Page 18. Thus, Konstantin lacks the claimed structure set forth in Claim 14 to solve the problem set forth on Pages 3, 15 and 16 and illustrated in Figures 6 and 7 of this application. Bezner lacks any clip whatsoever and certainly cannot teach how a clip would engage a pair of inner seam flanges at a lower location much less why such a construction aids in solving the problems being addressed with this invention. See Paragraph 14 of the Rule 132 Declaration from a man skilled in the art. Indeed, there is no suggestion in either Konstantin ‘024 or Bezner for

combining them to overcome the hinging phenomenon illustrated in Figures 6 and 6A and described in this application by lowering the hinge point 25 is done with the structure of Claim 14. The only reason to combine them would come from the present invention and, in any event, the combination still falls short of the claimed structure. Thus, it is submitted that Claim 14 and its dependent claims are patentable.

Dependent Claim 85 adds to Claim 14 that the internal connector assists the clip in retention of the glazing panels and that the internal connector is superimposed over the clip and that the seam covering member is superimposed over the internal connector. Neither the Konstantin '024 Patent nor Bezner have this stacked clip, internal connector and seam covering member much less an internal connector which assists the clip in retention of the glazing panels. Hence, Claim 85 is patentable for this additional reason.

Dependent Claim 86 adds to Claims 14 and 15 that the internal seam flanges are located lower than a top surface on the outer seam flange. Konstantin '024 has only a single seam flange and Bezner has his seam flanges at the same height. For this additional reason, it is submitted that Claim 86 is patentable.

Dependent Claim 87 adds to Claims 14 and 15 that the internal connector is stronger than the seam covering member for resisting uplift loads trying to pivot the glazing panels about a hinge point. Konstantin '024 and Bezner each lack any internal connector

much less an internal connector than is stronger than the seam covering member. Hence, Claim 87 is patentable for this additional reason.

Claim 44, as amended, and its dependent Claims 45-46 and 88-89 are submitted to be patentable over Bezner in that Bezner is directed to a glazing panel designed to provide a lower panel stack height for shipping and is unconcerned with a glazing panel that is constructed to be useable for panel retention with the combination of (1) a retention clip, (2) an internal connector, and (3) an external connector. Bezner does not disclose a second interlock facing away from the adjacent vertical end wall for interlocking with an external connector that is superimposed over the internal connector. In Bezner, the interlock on the outer seam flange faces toward rather than away from the vertical end wall as recited in Claim 44. Bezner a pair of upstanding seam flanges 12 define a channel therebetween that is filled with a depending rail portion 22 of the single covering, external connector 18 and there is no room left in the channel for cooperation with an internal connector. Bezner's panel is designed to reduce the stacking height of the glazing panel and is not directed to a glazing panel having its interlocks configured and positioned to interlock with both an internal and external connector. Because Bezner is not directed to solving the panel uplift and hinging problem and because his panel lacks the Claim 44 recited structures to solve the panel lifting problem with high winds, as illustrated in Figures 6 and 7, it is submitted that Claim 44 and its dependent claims are patentable over Bezner.

Dependent Claim 45, as amended, recites that stepped surfaces on the interlocks are at different heights for the respective internal and external connectors. In Bezner, the stepped surfaces on the seam flanges 10 and 12 for the single connector are at the same, at identical height. Claim 88 adds to Claim 45 that the stepped surfaces for the internal connector are at a height lower than the height of the stepped surfaces for the external connector. The interlocks on the seam flanges in Bezner are at the same height because there is no internal connector having an external connector superimposed over the internal connector. Thus, Claims 45 and 88 are submitted to be patentable for these additional reasons.

Dependent Claim 89 adds to Claim 44 that the glazing panel has a clip engaging surface on a portion of the internal upstanding seam configured to engage the clip at a location lower than the top of the outer upstanding flange to lower a hinge point for the glazing panel and the clip. Bezner does not disclose a clip and does not have a lower clip engaging surface to lower a hinge point. Thus, Claim 89 is submitted to be patentable over Bezner for this additional reason.

Claim 90 is submitted to be patentable over Konstantin '024 and Bezner in that they lack:

- 1) “an internal channel connector having an inverted, substantially U-shape superimposed over the clip”

- 2) the internal connector being “configured to engage the first upstanding seam flanges to retain the glazing panels against uplift loads;”
- 3) an external channel connector having an inverted, substantially U-shape superimposed over the clip and internal connector; and
- 4) an external connector covering the clip, the internal connector and seam.

Both Konstantin ‘024 and Bezner lack an internal channel connector having an inverted U-shape. See Paragraph 15 of the enclosed Declaration where a man skilled in the art declares that neither the Bezner nor the ‘024 Patent disclose an internal U-shaped connector. Therefore, the combination of Konstantin ‘024 and Bezner, assuming arguendo these references directed to different problems are properly combinable, still falls short of disclosing these four claim structural distinctions. Hence, it is submitted that Claim 90 is patentable.

Dependent Claim 91 adds to Claim 91 the additional structural distinctions of:

- 5) “the internal connector is made of metal;” and
- 6) the internal connector “is stronger in its resistance to uplift loads than the external connector.”

Neither Konstantin ‘024 nor Bezner disclose an internal connector whatsoever much less one made of metal and being stronger than the external connector. Neither patent recognizes that rather than using a single connector that two connectors may be made of different materials with the internal connectors being made stronger than the external connector to resist panel

separation under high loads. Hence, Dependent Claim 90 is patentable for these additional reasons.

Dependent Claim 92 adds to Claim 90 another distinction:

- 7) the first upstanding seam has a lower height than the second upstanding seam flange.

Because Konstantin '024 has but a single seam flange and lacks the first and second seam flanges; and because Bezner has a pair of seam flanges at the same height, it is submitted that Claim 91 is patentable for this additional reason.

Dependent Claim 93 adds to Claim 90 that the clip engages the first seam flanges at locations lower than the upper ends of second seam flanges to lower a hinge point between adjacent glazing panels. Konstantin '024 has only single upstanding flanges and Bezner lacks any clip much less one engaging the first hinge flanges at a lower point to lower a hinging point. Thus, it is submitted that Claim 93 is patentable for this additional reason.

Claim 94 is submitted to be patentable over Konstantin '024 and Bezner each of which lacks a pair of inner upstanding seam flanges having a shorter height than the height of a pair of upstanding outer seam flanges. See Paragraph 13 of the enclosed Declaration under Rule 132. Additionally, Bezner and Konstantin '024 each lack the recited combination of:

1) interlocks on a pair of shorter upstanding seam flanges configured for connection to an internal connector; and

2) interlocks on a pair of taller seam flanges configured for connection to an outer connector as recited in Claim 94.

Thus, it is submitted that Claim 94 is patentable over Konstantin '024 and Bezner.

Claims 13, 16-24, 26-28, 31-43 and 47-72, which are withdrawn from consideration, have been cancelled with applicant reserving the right to file a divisional application with these claims therein.


In view of the foregoing, it is submitted that the application is in condition for allowance which is respectfully requested.

Respectfully submitted,

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